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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,523	07/10/2003	Volker Doring	MB 374	1209

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PATENTS AND TRADEMARKS
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MURRYSVILLE, PA 15668

EXAMINER

HANAN, DEVIN J

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,523

Applicant(s)

DORING ET AL.

Examiner

Devin Hanan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 5 is/are rejected.
- 7) ☒ Claim(s) 2 and 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/10/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doring et al. (U.S. Patent 6,374,611) in view of Elpern (U.S. Patent 4,656,834).

Doring discloses an exhaust gas turbine for a turbocharger of an internal combustion engine, with comprising a turbine casing (col. 2 line 62) with an inlet duct (3), a rotor (5) rotatably supported in said turbine casing, a guide vane structure (7) axially movably (30) supported in said casing so as to be movable axially into and out of an annular space (25) surrounding the rotor and a slide sleeve (27), said slide sleeve extending around a tubular inner member (26) forming an axial the outlet duct (31) and being connected to the guide-vane structure (7).

Doring et al. does not disclose an actuating device arranged, in the region of the outer circumference of the rotor for moving the guide vane structure with the actuating device consisting of an operating member in the form of an electrically operable actuator which is connected via a connecting part to a slide sleeve.

However Elpern teaches of an actuating device arranged, in the region of the outer circumference of the rotor for moving the flow regulating structure with the

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actuating device consisting of an operating member (56) in the form of an electrically operable actuator which is connected via a connecting part to a slide sleeve (52, col. 3 lines 46-48) for the purpose of having rapid and accurate turbocharger control (col. 1 lines 61-65).

Since Elpern and Doring et al. are from the same field of endeavor, exhaust flow regulating devices, the purpose disclosed by Elpern would have been recognized in the pertinent art of Doring et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to actuate the guide vane structure of Doring et al. with the electronically controlled actuator of Elpern for the purpose of having rapid and accurate turbocharger control (col. 1 lines 61-65).

Regarding claim 3, Doring et al. discloses all of the above claimed elements, but does not disclose the electrically operated actuator is a stepping motor.

However, Elpern teaches of using a stepping motor as the electrically operated actuator (col. 5 lines 54-56) as the means to provide rapid and accurate turbocharger control (col. 1 lines 61-65).

Since Elpern and Doring et al. are from the same field of endeavor, exhaust flow regulating devices, the purpose disclosed by Elpern would have been recognized in the pertinent art of Doring et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to actuate the guide vane structure of Doring et al. with the electronically controlled actuator, in particular a stepper motor, of Elpern with the stepping motor being the means to rapidly and accurately control the turbocharger (col. 1 lines 61-65).

Regarding claim 5, Doring discloses an exhaust gas turbine comprising a turbine casing, a rotor (5) mounted rotatably in the turbine casing, said casing having a spiral inlet duct (3) followed by an annular space (4) disposed around the rotor, said casing including near the outer circumference of the rotor an axially extending annular gap (25) between the turbine casing and an inner guide tube (26), a guide vane structure (7) having one end face facing away from the annular gap (25) provided with axially extending pins (28) disposed in bores of said casing and being movable axially into an annular space, a slide sleeve (27) acting on the ends of the slide pins (28) for moving said pins, said guide vane structure (7) having guide vanes (8) extending between two end-face cover discs (18, 19), said guide vanes (8) when disposed in the annular gap (8) closing the annular gap with a cover disc, said sliding pins (28) being joined to the sliding sleeve (27) after the mounting of the axial slide (30) and of the slide sleeve (27) on the inner guide (26).

Doring et al. does not disclose an actuating device in the form of an electrically operable actuator for axially moving said guide vane structure (7).

However, Elpern teaches of an electrically operable actuator as the as the means to provide rapid and accurate turbocharger control (col. 1 lines 61-65).

Since Elpern and Doring et al. are from the same field of endeavor, exhaust flow regulating devices, the purpose disclosed by Elpern would have been recognized in the pertinent art of Doring et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to actuate the guide vane structure of Doring

et al. with the electronically controlled actuator of Elpern as the means to provide rapid and accurate turbocharger control (col. 1 lines 61-65).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent 6,478,536 in view of U.S. Patent 4,656,834 (Elpern hereinafter).

Although the claims are not identical, there are not patentably distinct differences. The application claims are broader in at least one aspect and also recite additional features not claimed in the patent claims.

Regarding the broadening aspect of the application claims, the interaction of the outer cover ring with the casing, of patent claim 1 has been excluded in the presentation of the application claims. Thus it is apparent that the more specific patent claim 1 encompasses application claims 1, 3 and 5. Following the rational in *In re Goodman*,

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cited above, where applicant has once been granted a patent containing a claim for the specific or narrower invention, applicant may not then obtain a second patent with a claim for the generic or broader invention without first submitting an appropriate terminal disclaimer. Note that since application claims 1, 3 and 5 are anticipated by patent claim 1, and since anticipation is the epitome of obviousness, then application claims 1, 3 and 5 are obvious over patent claim 1.

Application Claims	Patent Claims
<p>1. An exhaust gas turbine for a turbocharger of an internal combustion engine, with comprising a turbine casing (1) with an inlet duct (13), a rotor (1a) rotatably supported in said turbine casing, a guide vane structure (9) axially movably supported in said casing so as to be movable axially into and out of an annular space (8) surrounding the rotor (1a), <i>and an actuating device (23) arranged, in the region of the outer circumference of the rotor for moving the guide vane structure (9) said actuating device (23) consisting of an operating member in the form of an electrically operable actuator (21) which is connected via a connecting part to a slide sleeve (5), said slide sleeve extending around a tubular inner member (4) forming an axial the outlet duct (14) and being connected to the guide-vane structure (9).</i></p>	<p>1. An exhaust turbine for a turbocharger, comprising: a turbine casing, a rotor rotatably supported in said turbine casing, said turbine casing having a spiral exhaust gas inlet for supplying exhaust gas to said rotor for driving said rotor and an annular space formed in said inlet directly adjacent said rotor, an annular guide vane structure slideably supported in an axial cavity formed in said casing such that said guide vane structure is disposed in said annular space and a retracted position in which said guide vane structure is contained in said axial cavity, said guide vane structure having outer and inner cover rings disposed at opposite axial ends thereof and said casing having an axial recess formed therein opposite said axial cavity, said outer cover ring being sized and shaped so as to be fitted into said recess when said guide vane structure is in its extended position while the inner guide vane ring is disposed at the outer end of said axial cavity so as to smoothly cover said cavity and said outer cover ring being disposed at the outer end of said axial cavity when said guide vane structure is in a retracted position and having an outer surface smoothly covering said axial cavity.</p>
<p>3. An exhaust-gas turbine according to Claim 1, wherein the actuator is an electrically operated stepping motor.</p>	
<p>5. An exhaust gas turbine comprising a turbine casing (1), a rotor mounted rotatably in the turbine casing (1), said casing having a spiral inlet duct (13) followed by an annular space (8) disposed around the rotor (1a), said casing (1) including near the outer circumference of the rotor (1a) an axially</p>	<p>1. An exhaust turbine for a turbocharger, comprising: a turbine casing, a rotor rotatably supported in said turbine casing, said turbine casing having a spiral exhaust gas inlet for supplying exhaust gas to said rotor for driving said rotor and an annular space formed in said inlet</p>

<p>extending annular gap (3) between the turbine casing (1) and an inner guide tube (4), a guide vane structure (9) having one end face facing away from the annular gap (3) provided with axially extending pins (6) disposed in bores of said casing and being movable axially into an annular space, a slide sleeve (5) acting on the ends of the slide pins (6) for moving said pins (6), said guide vane structure (9) having guide vanes (10) extending between two end-face cover discs (11, 12), said guide vanes (10) when disposed in the annular gap (8) closing the annular gap with a cover disc, said sliding pins (6) being joined to the sliding sleeve (5) after the mounting of the axial slide (2) and of the slide sleeve (5) on the inner guide (4), <i>and an actuating device in the form of an electrically operable actuator (22) for axially moving said guide vane structure (9).</i></p>	<p>directly adjacent said rotor, an annular guide vane structure slideably supported in an axial cavity formed in said casing such that said guide vane structure is disposed in said annular space and a retracted position in which said guide vane structure is contained in said axial cavity, said guide vane structure having outer and inner cover rings disposed at opposite axial ends thereof and said casing having an axial recess formed therein opposite said axial cavity, said outer cover ring being sized and shaped so as to be fitted into said recess when said guide vane structure is in its extended position while the inner guide vane ring is disposed at the outer end of said axial cavity so as to smoothly cover said cavity and said outer cover ring being disposed at the outer end of said axial cavity when said guide vane structure is in a retracted position and having an outer surface smoothly covering said axial cavity.</p>
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With respect to the additional features recited in the application claims (shown in italics in claims 1 and 5), the inclusion of an electrically operable actuator is an obvious improvement in view of Elpern.

Elpern teaches to use an electrically operable actuator (col. 2 lines 6-25) connected via a connecting part (56) to a flow regulating member (waste gate 54) for the purpose of having rapid and accurate turbocharger control (col. 1 lines 61-65).

Since the patent claims recite turbochargers with guide vane structures slideably supported and Elpern teaches of a actuator to move flow regulating members, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the guide vane structure to be moveable by the electronic actuator for the purpose of having rapid and accurate turbocharger control (col. 1 lines 61-65).

Allowable Subject Matter

Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

The patent to Lutz et al. (U.S. Patent 6,810,666) was cited for its teaching of an electrically controlled actuator (col.1 lines 29-32) which directs the movement of a nozzle ring (10).

The patent to Schmidt et al. (U.S. Patent 5,267,829) was cited for its teaching of an guide vane structure (7).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devin Hanan whose telephone number is 571-272-6089. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on 571-272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Patent Examiner
Art Unit 3745



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9/6/05